WILDLIFE-LOGGING INTERACTIONS IN TROPICAL FORESTS SUMMARY STATEMENT OF A WORKSHOP HOSTED BY WCS AND BOLFOR IN SANTA CRUZ, BOLIVIA 13-15 NOVEMBER, 1996

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INTRODUCTION

Protected areas in the tropics are currently inadequate to protect the biological diversity characterizing this region, owing to their limited size, number, distribution, and composition. Within forested landscapes, production forests may contain significant biodiversity not found within totally protected areas. In many countries, the large size and varied habitats of these forests can complement the existing system of reserves, and taken as part of the landscape, can make significant contributions to biodiversity conservation. Current exploitation trends and practices within production forests however, have direct and indirect positive and negative impacts on many plant and animal species. Steps must be taken to improve our understanding of the effects of management practices on biological diversity, ways to mitigate negative aspects associated with them, and where our efforts should focus in the future to achieve ecological and economic sustainability of our natural resources.

RESULT OF A WORKSHOP

A workshop was organized in Santa Cruz, Bolivia to evaluate our current understanding of the interactions between wildlife and timber production in the tropics, and the implications for sustainable forest management. This meeting was part of a process that will result in publication of a book being developed by WCS along the same theme. In a mixed forum, foresters, wildlife biologists, resource managers, and policy makers, reviewed the importance of wildlife as a component of production forests, and the ways in which conventional logging practices impact their populations. Discussions focused on clarifying: a) the reasons for conserving wildlife in production forests; b) the methods needed to evaluate timber harvesting-wildlife interactions; c) current techniques to reduce silvicultural impacts on biodiversity; d) the role of natural forest management and certification programs in biodiversity conservation; and, e) where research and management efforts should be focused in the future. Below are the key findings of the workshop.

1. Biological diversity is important for maintaining the long-term health and productivity of natural forests. We do not understand or appreciate the roles that all organisms play in this process, but prudence suggests that efforts must be made to maintain suitable habitat for these organisms within major forest types. Production forests that are carefully managed for timber and non-timber products (NTFP) can significantly contribute to the conservation of biodiversity at the stand and landscape levels.
2. There are a few tropical forests carefully managed for their long-term productivity and ecological integrity, with current timber harvesting practices in most areas having direct and indirect negative impacts on the biodiversity of these forests. While economic incentives and government policies have begun to slowly shift this trend of forest exploitation towards sustainable forest management, most timber harvesting practices for the foreseeable future will continue to degrade the biological quality of production forests.
3. Basic techniques exist to evaluate the impacts of timber harvesting practices on biodiversity. A two-tiered approach to biodiversity inventorying and monitoring, using longitudinal (pre and post-treatment) multi-taxonomic studies at the landscape level and evaluations of rare, threatened, and exploited species (plant and tnimal) at the stand or management unit (i.e. concession) level, is suited to providing resource planners and managers with feedback on their management prescriptions.
4. All forest management activities impact biodiversity, however basic techniques exist to mitigate many of the negative impacts associated with silvicultural practices. Careful implementation of reduced logging impact (REL) measures can help to lower the direct and indirect impacts of these activities on native fauna and flora communities (minimizing roads, directional felling, control of hunting, etc.), thus helping to conserve biological diversity.
5. Stream corridors and steep sloping sites within concessions should be withdrawn from harvesting activities given their importance in protecting water and soil resources, and their apparently high value as forested corridors and wildlife habitat. In addition to these sites, 10 % or more of the proposed cut area should be considered for reserve status, as these uncut parcels create refuges from which animals and plants disturbed by silvicultural activities can eventually recolonize and stabilize the post-treatment area (from both ecological and economic standpoints).

6. Research is still needed to refine the above mentioned techniques, with priority topics including: a) clarifying the role of keystone/indicator species within logged and unlogged landscapes; b) assessing site specific impacts of silvicultural practices on stand structure and composition (biodiversity), including harvesting systems and intermediate practices; c) determining the size, shape, distribution, value, and percentage of reserve areas within actively managed landscapes (i.e. large continous block versus many small parcels linked by corridors); d) identifying similarities/ dissimilarities between natural disturbance events and silvicultural practices; e) locating gazetted tropical production forests onto GIS maps that identify the biodiversity values of these forests; and, f) establishing rotation lengths and recovery periods for major forest types that maintain both ecological health of the resource and economic viability of the management operation.

7. In many areas of the tropics 'cultural' changes are required before forest managers will be in a position to implement practices that effectively reduce ecological impacts while maintaining the economic viability of silvicultural treatments. Steps to overcome these obstacles include:

a. supporting continued improvement and expansion of REL systems that demonstrate real promise for reducing harvesting impacts and costs.

b. identifying and disseminating knowledge about tax incentives and other government policies that promote reinvestments into sustainable forestry by both the public and private forestry sectors.

c. developing and expanding certification programs that can provide both financial and non-financial incentives for ecologically-sound management in production forests.

d. involving all stakeholders (foresters, wildlife managers, concession holders, researchers, policy makers, local communities, etc.) in the design, application, and betterment of natural forest management practices.

e. convening working sessions where foresters, concession holders, researchers, and the general public together can share ideas regarding the value of biodiversity to the forest and their respective interests, and measures that might be undertaken to protect these assets.

f. strengthening laws and the enforcement capacity of government agencies that protect and promote biodiversity conservation and sustainable forest management efforts, including the gazetting of additional reserves and production forests.

g. developing and broadly disseminating practical manuals, public education materials and applied training programs focused on how to effectively incorporate the conservation of biological resources into commercial forest management, targeting audiences such as public and private sector forestry specialists, loggers, wildlife managers, environmental groups, and the general public.

8. In many production forests, reducing harvesting impacts and regenerating commercial timber species for a longterm yield of timber, offer the best hope of retaining forest cover and the habitat it creates for the native fauna and flora. However, in other areas biodiversity may best be conserved by other means, including gazetting the forest for other purposes such as NIW production, low impact recreation, ecological research, watershed protection or somethink of these low-intensity, resource-use activities. A central challenge for donors, policy makers, conservation biologists and foresters is to identify and adopt the most effective means to conserve biodiversity in forest landscapes including production and protected forest areas.

Notes on Wildlife Conservation Society

The Wildlife Conservation Society (WCS), established in 1895, is a non-governmental, not-for-profit conservation organization dedicated to conserve in wildlife and wild places throughout the world. WCS's strategy is to support comprehensive field studies to gather information on wildlife needs, train local conservation professionals, and work with in-country staff to protect and manage wildlife and wild areas for the future. Our international conservation programs consist of more than 250 field projects in 52 countries across Africa, Asia, Latin America and North America. With over 150 professional conservationists, and more than 100 research fellows, WCS has the largest professional field staff of any U.S.-based international conservation organization.